

## [0070] CLAIMS

I claim:

- 1) A method of providing nutrient compositions comprising:
  - providing various nutrients for increasing bodily energy balance, which comprises:
    - providing at least one nutrient in order to assist in fat oxidation and so provide glucose for energy;
    - providing at least one nutrient in order to assist in gluconeogenesis and so provide glucose for energy;
    - providing at least one nutrient in order to assist in conversion of existing muscular energy stores;
    - providing at least one nutrient in order to assist in transport of any of above said nutrients into a muscle cell;
  - providing various nutrients for decreasing muscle catabolism; and,
  - providing various nutrients for increasing protein synthesis.
- 2) A method as in claim 1 wherein:
  - said providing at least one nutrient in order to assist in fat oxidation and so provide glucose for energy further comprises providing HMB;
  - said providing at least one nutrient in order to assist in gluconeogenesis and so provide glucose for energy further comprises providing L-Alanine;
  - said providing at least one nutrient in order to assist in conversion of existing muscular energy stores further comprises providing Creatine;
  - said providing at least one nutrient in order to assist in transport of any of above said nutrients into a muscle cell further comprises providing GPA;

- said providing various nutrients for decreasing muscle catabolism further comprises providing Glutamine; and,
  - said providing various nutrients for increasing protein synthesis further comprise providing Putrescine and TMG.
- 3) A method according to claim 2, wherein the administering step is performed on a daily basis.
- 4) A method according to claim 2, wherein the administering step is performed following an exercise period.
- 5) A method of providing nutrient compositions comprising providing energy through exogenous nutrients, which further comprises providing a first compound that may utilize endogenous fat stores; providing a second compound that may increase transport of endogenous energy stores; providing a third compound that may increase available energy to a muscle; providing a fourth compound that may assist in anticatabolic reactions and providing a fifth compound that may increase protein synthesis.
- 6) An composition for enteral or parenteral administration comprising:
  - Mono- or Dicreatine-HMB salt;
  - Putrescine Dihydrochloride;
  - Alanine
  - L-Glutamine;
  - Trimethylglycine; and,
  - Guanidinopropionic Acid.
- 7) A composition according to claim 6 wherein the molecular ratio of Alanine to L-Glutamine ranges from 1:2 to 2:1.
- 8) An composition for enteral or parenteral administration comprising:

- 1 to 10 grams by weight of Mono- or Dicreatine-HMB salt;
  - 10 mg to 10 grams by weight of Putrescine Dihydrochloride;
  - 1 to 30 grams by weight of an amino acid compound comprising Alanine chemically bound at a 1:1, 2:1 or 1:2 molecular ratio to L-Glutamine;
  - 100 mg to 10 grams by weight of Trimethylglycine; and,
  - 10 mg to 5 grams of Guanidinopropionic Acid.
- 9) The composition of claim 8 formulated for enteral administration comprising said unit dosage form admixed with flavors and sweeteners.
  - 10) The composition of claim 8 formulated for enteral administration comprising said unit dosage form contained in blended powder or one or more capsules.
  - 11) A composition according to claim 8 wherein said composition is in the form of a powder, tablet, capsule, pill, liquid, food additive, candy, confection or nutrition bar.
  - 12) A composition according to claim 11 wherein said powder is admixed with a liquid.
  - 13) The composition of claim 8 in a sustained release form.
  - 14) A method for enhancing the physical endurance of a mammal by administering to said mammal a therapeutically effective amount a composition comprising of:
    - Mono- or Dicreatine-HMB salt;
    - Putrescine Dihydrochloride;
    - Alanine
    - L-Glutamine;
    - Trimethylglycine; and,
    - Guanidinopropionic Acid.

- 15) A method for increasing the energy balance in a mammal which comprises administering to a mammal a therapeutically effective amount of a composition comprising:
- Mono- or Dcreatine-HMB salt;
  - Putrescine Dihydrochloride;
  - Alanine
  - L-Glutamine;
  - Trimethylglycine; and,
  - Guanidinopropionic Acid.
- 16) A method according to claim 14, wherein administering is performed on a daily basis.
- 17) A method according to claim 14, wherein administering is performed following an exercise period.
- 18) A method according to claim 14, wherein the composition comprises an amount of from about 5 grams to about 100 grams per day.
- 19) A method according to claim 14, wherein the composition comprises an amount of about 9 grams to about 27 grams per day.
- 20) An composition comprising 50% Dcreatine-HMB; 20% Alanyl-L-Glutamine; 10% TMG; 5% Putrescine Dihydrochloride; 5% GPA and 10% flavors and sweeteners.
- 21) A method according to claim 16, wherein said daily administration comprises at least two partial daily administrations of said composition.
- 22) A composition according to claim 8 wherein said compound weights are adjusted according to predetermined factors.
- 23) A composition according to claim 22 wherein said predetermined factors include an individual's weight.

- 24) A composition according to claim 22 wherein said predetermined factors include an individual's exercise intensity.
- 25) A composition according to claim 22 wherein said predetermined factors include an individual's lean body mass.
- 26) A composition according to claim 22 wherein said predetermined factors include an individual's proportion of body fat to lean body mass.
- 27) A composition according to claim 22 wherein said predetermined factors include an individual's progress along a loading cycle.
- 28) A method according to claim 1, wherein administering is performed on a daily basis.
- 29) A method according to claim 28, wherein said daily administration comprises at least two partial daily administrations of said composition.